Abstracts

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Innovations for Improving Efficiency, Equity and Environment

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IFAD
Enabling poor rural people to overcome poverty

Rice Wheat

resource conservation in absence of stakeholders' analysis. Thus ascertaining the breeding objectives and methodologies and tools for participatory learning and action and economic perspectives of enhanced agro-biodiversity use, can meet the twin objectives of managing genetic resources and incremental participation of the local community. Greater incorporation of participatory elements will enhance the effectiveness of matching outputs more closely to the requirements of the stakeholders.

A Farming System Modelling Approach Linked with a Farming Systems Reference Monitoring Network to Assist Decision Making Process in Development Project Supporting DMC in Madagascar

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Two agricultural development projects are currently implemented in Madagascar taking into account both a watershed approach as well as a farming system approach for dissemination: BV-lac in the area of the Lake Alaotra and BVPI in Vakinankaratra (central high plateaux). A farming systems reference monitoring network (FSRMN) has been set since 2007 with two objectives: i) to help the project in the decision making process for choosing technologies to be developed according to a farmers' typology using prospective analysis, and ii) to monitor the project's economic impact in the short and mid-term. A farming system modelling approach using a software developed by INRA-CIRAD-IAMM ("Olympe", JM Attonaty, INRA), has been developed with local project field operators in order to cope with local situations and favour best adapted technologies to farmers' conditions including direct seeding mulch-based cropping systems conservation tillage (DMC).

The paper presents the methodology, the tools and some results from BV-lac. FSRMN and farming system modelling, among other tools including partnership approach, lead to identification of innovation processes and adoption and/or adaptation of DMC systems by farmers in order to understand farmers' strategies. The model provides economic results displaying the real income improvement and impact on farming practices, labour and organisational changes. FSRMN and FSM have been so far well adopted as tools at project levels to cope with the best adequation between farmers 'needs and projects proposals for DMC techniques.

Mixed Crop-Livestock Production System, Soil Health and Environment- A Trade-Off Analysis

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Livestock is playing an increasingly significant role in the production systems of developing countries experiencing increasing demand for food for growing population and dietary changes. Farmers are intensifying their agricultural production by integration of crop and livestock production systems, utilizing marginal lands and converting community grazing lands to arable land. Recent evidence shows that in these systems, soil degradation is occurring extensively as pastures are degrading through overgrazing. Sustainability of mixed farming systems in terms of improved pastures and optimal stocking rates may be questioned for paying little attention to the effects of manures and crop residues on soil processes, the maintenance of soil fertility and prevention of soil degradation. Resource-poor farmers face decision